

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 78.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-030072**Date Inspected:** 25-Sep-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Steward Machine Co.**Location:** Birmingham, AL**CWI Name:** Fred Hudson / Jimmy Brewer**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** E2 Shear Key Anchorages**Summary of Items Observed:**

Quality Assurance Inspector (QAI) Andrew Webster was present on the date and times noted above in order to observe the fabrication and Quality Control (QC) functions performed by Steward Machine Company for the E2 Shear Key Anchorages for the SFOBB project. The following items were observed:

Steward Machine - Plant 1:

This QAI performed a walkthrough at the shop to verify plates on site and to observe Steward Machine personnel at work machining and welding. Work performed at the Steward Machine shop as noted below:

CNC Machine #230 milling assembly S4C. (Machining side B)

CNC Machine #231 milling assembly S4B. (Machining east end)

The following plates were noted staged throughout the shop in various stages of processing.

Bay 4 – Plates:

S3C-e3. Formed, stressed relieved, partially machined and stud welded.

S4C-e4. Formed, stressed relieved, partially machined and stud welded.

Pallet of r3, m3, k3 and j3 plates.

p3 (x6). Cut, beveled and stud welded.

S3C assembly:

This QAI noted the above mentioned assembly in the welding jig being welded. The welding was done by qualified welder John Roy (469). The welding was done to the approved welding procedure (WPS) P2-W126-B.

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All welding done was monitored by Certified Welding Inspector (CWI) Fred Hudson. The welding was being done on side B.

This QAI noted at shift change that the welding was done by qualified welder Daniel Rowe (73). The welding was done to the approved welding procedure (WPS) P2-W126-B. All welding done was monitored by Certified Welding Inspector (CWI) Jimmy Brewer. The welding was being done on side A. The welding on side A was completed and the part was moved into positions for welding of the east end. The root pass was welded on the east end after which this QAI witnessed the QC Inspector MPT the root pass. After the QC Inspector was done with his MPT inspection this QAI performed the required MPT verification on the root pass. After the MPT was found to be acceptable the welder continued to weld the east end of the assembly.

S3B assembly:

This QAI noted the above mentioned assembly the e3 plate fit and the root welded on side A. This assembly was flipped to side B and the root was welded. The welding was done by qualified welder Benjamin Rhodes (481). The welding was done to the approved welding procedure (WPS) P2-W128-B. All welding done was monitored by Certified Welding Inspector (CWI) Fred Hudson. After the welder completed the root pass this QAI witnessed the QC Inspector MPT the root pass on side B. After the QC Inspector was done with his MPT inspection this QAI performed the required MPT verification on the root pass. After the MPT was found to be acceptable the welder continued to weld e3 plate joint on side B.

This QAI noted at shift change that the welding was done by qualified welder Jeffery Hennington (476). The welding was done to the approved welding procedure (WPS) P2-W128-B. All welding done was monitored by Certified Welding Inspector (CWI) Jimmy Brewer. The welding was being done on side B. The welding on side B was completed and the part was flipped and welded on side A.

S4B assembly:

This QAI noted the machine operator for machine #231 was grinding the sides of the strap welds to clean up where the welders ran off the plates without using run off tabs.

NON-DESTRUCTIVE TESTING (NDT).

The QA performed NDT on the following.

Assembly S3B to e3 plate (Root pass side B) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

Assembly S3C (Root pass East End) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

The Non Destructive Testing (NDT) listed above were observed performed and accepted by the QC Inspectors prior to the QA Inspector performing the tests. The QC Inspectors performed 100% NDT with the QA Inspector performing over 10% NDT.

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Summary of Conversations:

This QAI was informed that the night shift welding would be completed tonight and that there would be one welder welding on this project on the day shift starting tomorrow.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas 916-764-6027, who represents the Office of Structural Materials for your project.

Inspected By: Webster, Andrew

Quality Assurance Inspector

Reviewed By: Foerder, Mike

QA Reviewer